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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,559	03/29/2004	Rocky A. Turley	WEAT/0157.C1	1408

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EXAMINER

COLLINS, GIOVANNA M

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/811,559	Applicant(s) TURLEY ET AL.	
	Examiner Giovanna M. Collins	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/10/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20041110</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 21,24,25,and 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Hushbeck et al. 5,701,959.

Hushbeck discloses (fig. 3) a non-metallic element system, comprising a support ring (50) having two or more tapered wedges; an expansion ring (element 29 to the right) deformable to fill a gap formed between the tapered wedges of the support ring; and a sealing member (element 29 in the middle) disposed on a side of the expansion ring opposite from the support ring.

Referring to claim 24, Hushbeck discloses the tapered wedges (64) extend radially and engage an inner surface of a surrounding tubular.

Referring to claim 25, Hushbeck discloses the expansion ring (29) has an outer diameter complimenting an angle of the tapered wedges.

Referring to claims 31-33, Hushbeck discloses the system is part of a frac plug, bridge plug or packer (col. 8, lines 42-53).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solaeche P. et al. 5,226,492 in view of Streich et al. 5,271,468.

Solaeche discloses a element system comprising a support ring (20) having two or more tapered wedges; an expansion ring (24) deformable to fill a gap formed between the tapered wedges of the support ring; and a sealing member (36) disposed on a side of the expansion ring opposite from the support ring. Solaeche does not disclose the system is non metallic. Streich teaches non metallic materials reduce weight, reduce manufacturing time and labor. As it would be advantageous to reduce the weight of packer to help in the installation, it would be obvious to one of ordinary skill in the art to modify the element disclosed by Solache to be nonmetallic as taught by Streich.

Referring to claim 26, Solaeche discloses a cone (26) between he sealing member and the expansion ring.

Referring to claim 27, Solaeche discloses the cone has a tapered first section (below element 28) and a substantially flat second section (at element 36).

Referring to claim 28, Solaeche discloses the second section abuts the sealing member (36).

Referring to claim 29, Solaeche discloses the expansion ring (24) is disposed about the tapered first section.

5. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hushbeck '959 in view of "A World of Applications" by Advanced Composites.

Hushbeck discloses the element system of claim 21. Hushbeck et al further disclose that the support rings and expansion rings are made from composite material (see col. 10 lines 55-56) but do not disclose that the support rings or expansion rings include epoxy blend reinforced by glass fibers. Advanced Composites teaches a composite material that includes an epoxy blend reinforced by glass fibers (see page 3) stacked in layers angled at about 30 to 70 degrees (see Page 7 Figs. 8 and 9). Advanced Composites further teaches that the composite materials have high specific strength and are resistant to corrosion (see page 1, paragraph 5). Therefore it would be obvious to one skilled in the art at the time of the invention to modify the element system disclosed by Hushbeck to include epoxy blend reinforced by glass fibers as taught by Advanced Composites because the composite materials have high specific strength and are resistant to corrosion.

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Solaeche P. et al. 5,226,492 in view of Streich et al. 5,271,468 as applied to claim 26 and further in view of "A World of Applications" by Advanced Composites.

Solaeche, as modified, discloses the system of claim 11 but does not disclose that the support rings or expansion rings include epoxy blend reinforced by glass fibers. Advanced

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Composites teaches a composite material that includes an epoxy blend reinforced by glass fibers (see page 3) stacked in layers angled at about 30 to 70 degrees (see Page 7 Figs. 8 and 9).

Advanced Composites further teaches that the composite materials have high specific strength and are resistant to corrosion (see page 1, paragraph 5). Therefore it would be obvious to one skilled in the art at the time of the invention to further modify the element system disclosed by Solaeche to include epoxy blend reinforced by glass fibers as taught by Advanced Composites because the composite materials have high specific strength and are resistant to corrosion.

7. Claims 34-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanes 3,062,295 in view of Streich et al. 5,271,468.

Hanes discloses (figs 1-2) a method for sealing an annulus comprising running a tool into the wellbore, the tool comprising a body (6), a sealing system disposed about the body having a support ring (9) having two or more tapered wedges; an expansion ring (8); and a sealing member (33) disposed on a side of the expansion ring opposite from the support ring, extending the two or more tapered wedges to engage a surrounding surface and flowing the expansion ring to fill voids between the extended wedges (figs 4). Hanes does not disclose the system is non-metallic. Streich teaches non metallic materials reduce weight, reduce manufacturing time and labor. As it would be advantageous to reduce the weight of packer to help in the installation, it would be obvious to one of ordinary skill in the art to modify the element disclosed by Hanes to be nonmetallic as taught by Streich.

Referring to claim 35, Hanes discloses a cone (7).

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Referring to claim 36, Hanes discloses the expansion ring (24) create a collapse load on the cone.

Referring to claim 37, Hanes discloses the collapse load prevents rotation of the sealing member (33) and the cone (7).

Referring to claim 38, Hanes discloses the cone prevents axial slippage of the sealing system (col. 3, line 72-col. 4, line 1) .

Referring to claim 39, Hanes discloses extending the two or more taper wedges (21) cause each of the tapered wedges to break away from a portion of the support ring.

Referring to claim 40, Streich teaches a filament wound composite material (col. 3, lines 25-48).

Response to Arguments

8. Applicant's arguments with respect to claims 21-40 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

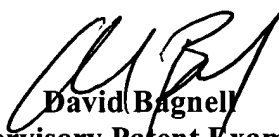
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 703-306-5707. The examiner can normally be reached on 6:30-3 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


gmc


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